

REMARKS

Claims 1 and 2 have been rejected as indefinite, claim 1 has been rejected as anticipated by Gefvert, and claims 1 and 2 have been rejected as anticipated by McShane. Reconsideration is respectfully requested in view of the attached amended claims and following comments.

There has clearly been some confusion as to which embodiments of applicant are encompassed by claims 1 and 2.

Claims 1 and 2, as originally filed and as amended, are directed to the embodiment of FIGs. 12a and 12b, as described in the specification at the bottom of page 26 and top of page 27, and FIGs. 37 and 38, as described in the specification at the bottom of page 34 and top of page 35 (wherein the addition of a center driver, FIG. 31, is discussed as an alternative). In a home theater environment, nothing more than a subwoofer directly below the head unit of FIG. 12 is needed to fill the room with sound seemingly from all directions.

In a movie theater or auditorium setting including outdoor (wall-less) auditorium, multiple units can be employed as shown in FIG. 39 and explained further on page 35.

As is shown in FIG. 12b, the two asymmetric hypercardioids 138 and 140 emanating from the array of drivers in the single loudspeaker 134 are mirror images produced when identical electrical signals are imposed in each of the two channels. While described in terms of asymmetric hypercardioids in FIG. 12, the two sound fields can be more generalized, as shown in FIGs. 37 and 38 and as defined in claims 1 and 2 of the applicant. Neither Gefvert nor McShane teach a single loudspeaker producing mirror image sound fields with maxima and minima less than 180° apart and complementary in each sound field

through the angle between the sound fields of the single loudspeaker. Therefore, the limitations in claims 1 and 2 distinguish over Gefvert and McShane.

Dependent claims 3 through 17 define further limitations shown in FIGs. 12, 13 through 22 and 37 through 39. It should be noted that "angle 252" in the second line from the bottom on page 34 is a typographical error and should be "angle 254," as shown in FIG. 37. An amendment to the specification is attached. Angle 254 is also indicated by the arrows in FIG. 12b. In a production version of this technology, a single loudspeaker unit about 20" across, 6" high and 12" deep plus a subwoofer unit directly below completely fills a home theater area about 12' across and 18' long in front of the loudspeaker with surround sound. More than two million dollars worth of these units were manufactured and sold.

PRELIMINARY REMARKS

Formal drawing sheets are attached to replace the informal FIGs. 29 through 39 filed with the parent CIP application no. 09/153,831. The more generalized sound fields originally shown in FIGs. 37, 38 and 39 have been replaced by the sound fields shown in FIG. 12B; however, the claims are not so limited because other sound fields with applicant's unique characteristics can be generated in addition to the asymmetric hypercardioids shown in the formal drawing figures.

The claims originally filed in the above CIP application were directed, in particular, to FIGs. 12B, 37, 38 and 39, as are the claims 1 through 17 filed April 1, 2004, in response to the after final examiner's action dated December 1, 2004, but are not necessarily limited to these figures. In addition, the Remarks filed April 1, 2004, are here attached separate from the cover sheet.



FIG. 29

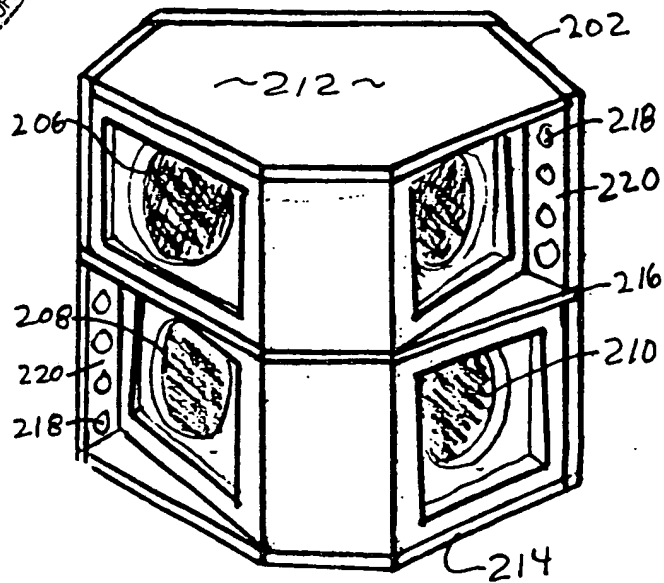


FIG. 37

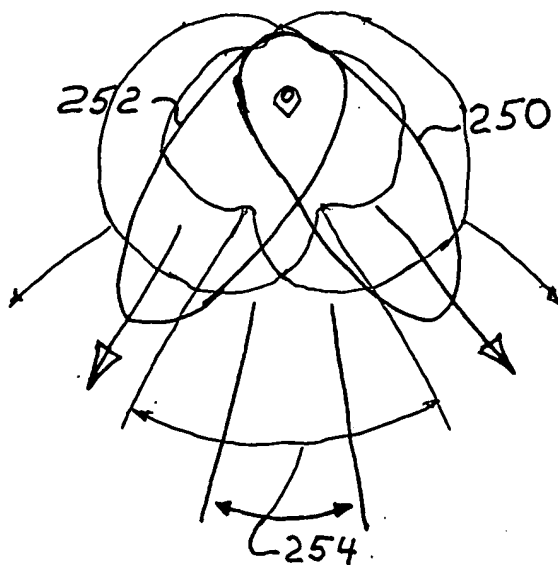


FIG. 38

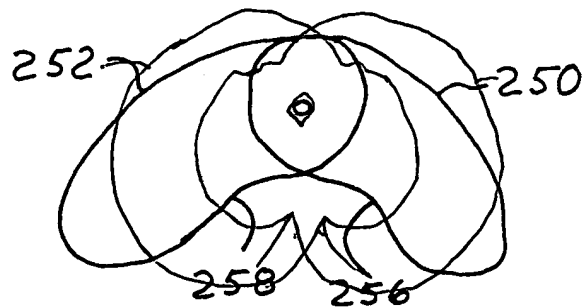




FIG.39

